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Case reports

A script for the telepractice of speech-language therapy and audiology services – what was learnt from the COVID-19 pandemic

Nathalia Avila Dimer[1]
https://orcid.org/0000-0003-4885-653X

Gabrielle do Nascimento Rasquinha[1]
https://orcid.org/0000-0002-7430-5670

Bárbara Niegia Garcia Goulart[1,2]
https://orcid.org/0000-0002-2502-5883

[1] Universidade Federal do Rio Grande do Sul - UFRS, Curso de Fonoaudiologia, Porto Alegre, Rio Grande do Sul, Brasil.

[2] Universidade Federal do Rio Grande do Sul - UFRS, Programa de Pós-graduação em Epidemiologia, Porto Alegre, Rio Grande do Sul, Brasil.

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Corresponding address:
Bárbara Niegia Garcia Goulart
Universidade Federal do Rio Grande do Sul
Ramiro Barcelos, 2400 – Santa Cecília
CEP: 90035-004 - Porto Alegre, Rio Grande do Sul, Brasil
E-mail: bngoulart@gmail.com

ABSTRACT

In this study, a script for the telepractice of speech language pathology and audiology services for adult patients at home, is presented. This tool was developed in three stages and used for a community project during the COVID-19 pandemic. A literature search was performed to identify the facilitators and barriers to remote patient care before implementing telepractice at a primary health care unit. This practical experience led to further discussions about the facilitators of clinical performance and different ways to remotely offer quality assessments and rehabilitation. Divided into three sections, the final script was organized into twenty items. To provide comprehensive patient care, detailed discussions were held about each item to verify the effectiveness and quality of the teleconsultations, for the script to be written. This guide is intended to be used as a tool for speech language pathology and audiology telepractice. However, it must be adapted to the cultural and social realities of the professionals and patients who use it. Additionally, it does not constitute a closed set of practices and procedures and should be updated as new procedures and technologies become available.

Keywords: Speech, Language and Hearing Sciences; Public Health; Rehabilitation; Coronavirus Infections; Remote Consultation

INTRODUCTION

Some developed countries have used telehealth since the 1970s as a strategy to increase access to health services. More recently, its potential to produce better health outcomes has been further explored[1].

In Brazil, telehealth centers have existed for more than a decade, primarily linked to federal universities. However, it was only in 2019, after the Ministry of Health was restructured to include the Department of Digital Health, that telehealth was officially recognized as a State policy under Decree No. 9795/2019[2]. This department is responsible for planning national digital health strategies to expand and improve the network of health services, especially Primary Health Networks (PHNs) and their coordination with other levels of care. The overall aim is to strengthen the Health Care Networks (HCNs) of the Brazilian public health system (*Sistema Único de Saúde* - SUS). For more than a decade, telehealth has had a similar history in the fields of speech language pathology and audiology. National and international groups have published studies about the subject, especially regarding aural rehabilitation (AR)[3-5].

Before the advent of COVID-19, patients had relatively restricted access to telehealth. However, when the World Health Organization declared the novel coronavirus a pandemic in mid-March 2020, telehealth services were gradually expanded and promoted to new levels of care[6]. There was a fundamental need to adapt patient access to health services, especially for the ones already undergoing treatment. New services were developed, such as the "SJD at Home" pediatric home hospital service (*Hospital en casa*) in Barcelona. Via teleconsultation, patients were afforded greater comfort at home, and severe cases in hospital received better attention. Moreover, this system helped allocate hospital beds for critically ill and COVID-19 patients[7].

Given that speech-language and hearing disorders can also significantly impact the quality of life of individuals and their families, optimizing health services and the feasibility of access are reasonable goals. The more favorable conditions that information and communication technologies (ICTs) can offer to multiple areas of health care have already been acknowledged. ICTs improve patient access to specialists, regardless of their location and/or the availability of professionals, offer more flexible appointment times, and reduce travel demands as well as the stress and fatigue associated with them[8-11].

In 2002, a study that included speech language pathologists (SLPs) and audiologists showed that 11% used telepractice and 43% expressed an interest in this type of care. They reported lack of knowledge as one of the main barriers to using telepractice for remote speech language therapy or AR[12].

Several studies have compared telehealth and face-to-face consultations and found that telepractice is a viable and effective method of offering speech-language and aural assessments and rehabilitation for different clinical conditions[13-15]. However, per the recommendations of the Brazilian speech language pathology and audiology federal council (*Conselho Federal de Fonoaudiologia*), SLPs and audiologists need to adapt to and qualify for this new model of health care[3].

One systematic review showed that a higher quality of telehealth implementation strategies was associated with better success[16]. A protocol is a tool for health care management that lists a set of appropriate and necessary steps for a given process[17]. A telepractice script for speech language therapy or AR can improve service and ensure that all the basic principles are followed to maximize the benefits of technologies in health care.

In this paper, a telepractice script that was used by SLPs and audiologists to attend to adult patients at home, is presented. It was developed as part of a community project during the COVID-19 pandemic.

CASE PRESENTATION

This speech language therapy and AR telepractice script for adult patients at home was developed by a professor of speech language pathology and audiology with experience in multidisciplinary work, telehealth, and SUS, assisted by an undergraduate research student. According to Resolution 466/12, this type of study does not require the analysis or approval of a research ethics committee.

The script was developed in three distinct stages. In the first step, a literature search was carried out using PubMed databases. Environmental and psychosocial aspects of patients and professionals were identified to examine their influence on telepractice for patients at home. These aspects included complaints, clinical evaluations, and diagnoses. Given the lack of studies that address the topic of telepractice in the field of speech language pathology and audiology, the search strategy was expanded to include other health professions and the findings were adapted to speech

language pathology and audiology. The main results are explained below.

An article published in 2022 had the partial objective of gathering information about the experiences, challenges and facilitators of professionals and patients working on physical rehabilitation. Regarding the implementation of a call center service, the main challenges were poor usability and access to technology, unclear video or audio, and safety concerns. Support from family members or caregivers who could help patients during their consultations was reported as a facilitator. The authors recommended personalized and person-centered care, clear and open communication, observation, preparation, and planning for this type of service[11]. Another study conducted in 2001 included patients who were more familiar with online teleconsultation tools and who rated the most user-friendly ones. The patients' overall impression of the remote care system was more positive after using it[18].

A systematic review published in 2019 examined 45 articles that used online consultation systems to provide real-time remote healthcare services to patients at home. The aim was to identify the facilitators and barriers to telecare for these patients. The authors of the review concluded that real-time online consultation systems can be of great benefit to patients in terms of convenience, reliability, availability of medical care and cost, as long as they are tailored to meet patients' needs and effectively improve the well-being and satisfaction of the patients. The authors listed high-speed internet, flexible appointments, and training for patients and professionals to easily use the online system as some of the facilitators for call center services. Another facilitator was the participation of family members during online consultations. This made treatment more convenient for patients and increased their adherence since they were encouraged by their family members to follow treatment responsibly. Moreover, the patients' positive perceptions of the privacy and security protections for teleconsultation systems may have further bolstered this model of care.

On the other hand, some of the facilitators can also be considered barriers to acceptability. These include interruptions at home, when patients become distracted by things or family members around them, as well as privacy concerns. Patients may be hesitant to have an online consultation because they are unfamiliar with the concept and technology, or dislike switching to new models of service. The lack of eye contact as well as physical and social contact during teleconsultations can also be a barrier to online care adherence[8].

Another systematic review performed in 2018, with the aim of evaluating the effectiveness of telemedicine strategies regarding the cost-effectiveness of care, hospitalizations, mortality, patient adherence and satisfaction, concluded that telemedicine is linked to better results when it is combined with a solid strategic plan. The researchers suggested that higher quality implementation strategies were associated with better results, as patients who adhere to telemedicine seem to show significantly increased satisfaction and quality of life, as well as reduced hospitalizations and related health costs[16].

In the second stage, the telepractice for speech language therapy and audiology services was implemented in a primary health care service (PHC) associated with a university hospital[19]. Besides providing adequate and effective care based on the findings in international literature, the experience of adapting the telepractice to the demands of SUS facilitated discussions regarding clinical speech language therapy and audiology.

However, there were some difficulties. They included establishing therapeutic contracts for online consultations, maintaining ethical principles (e.g., confidentiality and privacy) and reproducing the same quality of a face-to-face service. When the therapeutic contract was not well established, adherence and acceptability of treatment were sometimes lower.

The use of tools (cell phone, notebook, and tablet) and camera placement were also challenging during the teleconsultations. Patients needed guidance about where and how to set up their cell phones, as well as instructions regarding what needed to be visible during the appointment. Adapting speech-language pathology and AR techniques to train caregivers was also difficult.

In the third stage, the pilot script for the telepractice at the university PHC was written as part of the Community Speech Language Therapy and Audiology (FOCO - Fonoaudiologia Comunitária, in portuguese) project during the COVID-19 pandemic. Each consultation lasted approximately 30 minutes, and appointments were scheduled as frequently as twice a week or once every two weeks. Teleconsultations were conducted by speech language therapy and audiology students, and supervised by licensed and certified SLTs and audiologists.

Writing the script involved a detailed description of the main items of each stage of the telepractice

established by the team, a discussion about each of the listed aspects, and justification for this remote service for adult patients at home. The aim was to produce a tool that could contribute to the effectiveness and comprehensiveness of health care.

Thus, the main aspects that influence teleconsultation and the different ways to make the telepratice feasible for adult patients at home were identified, simplified, and organized into a script.

Before the teleconsultation

- Choose the technology to be used, taking into consideration the circumstances of the patient and professional. Avoid technologies that are not yet well developed, too complex or costly for the patient;
- Make sure the patient is aware of and agrees to using the recommended technology, and establish whether the teleconsultations will take place via text messages, video calls or voice calls;
- Ensure that the patient knows how to use the chosen technology, or that they have a caregiver capable of doing so;
- Verify the hearing thresholds of the patient to confirm their ability to clearly hear calls, or that there is a caregiver who can mediate conversations;
- Make sure that the patient has a strong enough voice for clear communication with professionals, or a caregiver who can mediate conversations;
- Choose the physical location where the service will be performed, preferably in an environment with few auditory and visual stimuli where the professional will not be interrupted. In the case of a video call, there must be adequate lighting;
- Obtain as much information as possible from the patient's medical record, or the referring professional, before carrying out the first teleconsultation;
- Define the objectives of the teleconsultation, as well as the therapeutic plan (if treatment is an option);
- Prepare the materials for professionals before the teleconsultation, so that they are at hand in the place chosen for the appointment. Instruct the patient to do the same if they will need to use materials (e.g., a stopwatch, tubes, a glass of water).

During the teleconsultation

- - Start the consultation by informing the patient about the responsibilities of speech language pathologists and audiologists, especially regarding data confidentiality;
- In the case of a video call, ask the patient to choose a well-lit place, position the cell phone, tablet, or computer in such a way that their face is fully visible, and keep their hands as free as possible since this helps with some exercises;
- Give the caregiver instructions when necessary and, whenever possible, also instruct any guardians about home activities;
- Speak slowly, using clear articulation and a firm voice;
- Explain the purpose of each technique to the patient and caregiver/guardian for greater therapeutic adherence (always use terms that are culturally and socially accessible to them. Avoid technical terms as much as possible);
- Make sure that the patient and the caregiver/guardian understand all the instructions and recommendations, using easy-to-understand, culturally appropriate vocabulary that matches their level of education;
- Adapt the therapeutic plan (i.e., exercises and home activities) to the routine of the patient and caregiver/guardian. Avoid prescribing or recommending activities that are unfeasible for them (patient and family adherence to treatment is one of the therapeutic goals since the speech language therapy exercises or auditory training must be done for rehabilitation to occur);
- Use the time of the teleconsultation well by being as clear and objective as possible while maintaining a personal approach that values human interaction.

After the teleconsultation

- Document the provision of patient care, keeping in mind that the record will be accessible to other professionals in the network who care for the same patient (use language and examples that can help them understand speech language and auditory assessments and therapy);
- Refer patients to other professionals whenever necessary;
- Request face-to-face assessments or services whenever necessary.

DISCUSSION

The script was organized into three sections: before, during and after teleconsultation. This allowed us to remotely monitor and evaluate the speech language therapy and AR provided for patients at home, thanks

to the use of ICTs. It also helped us to enhance the teleconsultations and prepare the professionals, patients, and caregivers for appointments.

Some studies have indicated that properly mastering platforms is a determining factor in achieving efficiency and improving patient satisfaction with teleconsultations as they adapt to and accept this model of care[8,20]. Another important finding in the literature is that, if a patient does not know how to use the telehealth platform, health care professionals can teach them[20]. Often, patients may be hesitant to use remote health care due to a lack of familiarity with the technology. As such, the choice of platform is similarly important for a successful teleconsultation.

Additionally, patients' abilities and their physical and cognitive status ought to be considered when planning teleconsultations. Peel et al[18] reported that patients with restricted mobility, complex social problems, low hearing thresholds, low vision and cognitive impairment fail to follow telerehabilitation programs at home. However, one way to circumvent these obstacles may be to include a caregiver who can receive instructions, mediate dialogue, and assist with home exercises when necessary.

Therapeutic adherence will probably be based on the patient's perception and acceptance of health services. One of these variables is their belief that therapy is effective for reducing the threat of disease or illness[8]. For that reason, patients should be made aware of the benefits of each therapeutic technique, as well as the risks of not following recommendations.

Another study showed that patients were more likely to trust telehealth systems if they were approved by their usual primary care providers[21]. In addition, they valued a personal approach involving human interaction[21]. Therefore, models of telehealth should demonstrate how they can be used in partnerships and play supporting roles in health care, rather than compete with the main providers of primary health services.

When producing this script, literature and clinical experiences were carefully reviewed and tested using patients with different speech-language and hearing disorders. However, it still has some limitations. Is it not a validated instrument, and there were no objective parameters to evaluate its effectiveness. Moreover, the target audience consisted of adults being treated in the primary health care system, in a middle-to-low class region of a southern capital in Brazil. The script will also have to be tested on a large scale in different regions of the country, and include a wider range of speech language therapists and audiologists, and adults with diverse social and cultural characteristics, as well as distinct degrees of limitation and dependence. On the other hand, it is a simplified, easy to use script for remote speech language therapy and AR. It is also generalizable and served its purpose for the project: to assist in the emergency implementation of a telepractice for speech language therapy and audiology services during the COVID-19 pandemic. It is worth mentioning that proper preparation for appointments helps professionals and patients have successful teleconsultations. According to the findings of a systematic review carried out in 2016, the main barriers to the acceptability of telehealth services can be eliminated through good management techniques and personal interactions between professionals and patients [22].

FINAL CONSIDERATIONS

The script in this paper was formulated as a tool for speech language therapy and AR teleconsultations, especially during public health emergencies. In the present project, it was an important aid for implementing a telepratice for speech language therapy and audiology services. However, it must be adapted to the cultural and social realities of the professionals and patients who use it. Furthermore, it does not constitute a closed set of practices and procedures. Rather, it should be updated as new procedures and technologies become available.

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